

R E M A R K S

The drawings were objected to because of an erroneous reference. The error is corrected with the enclosed amended drawing sheet. The Examiner's approval of the amended drawing is hereby requested. *af*

The numbering of claims 10-18 is corrected, to conform to the Examiner's comments.

Claim 8 is objected to because of an error in the automatic clause numbering. Claim 8 was also rejected under 35 USC 112 because the term "challenges" lacked proper antecedent basis. The numbering is corrected, and the claim is amended to specify that the requesting of substep (a) constitutes a challenge; and since there is one such challenge for each of the generated random numbers, the plural term "challenges" in the step of authorized has proper antecedent basis. A number of other corrections are made.

Claims 9-14 (as renumbered by the Examiner) were rejected under 35 USC 101. Claim 9 is amended herein to overcome the rejection.

Claims 16-17 were rejected under 35 USC 112 because, according to the examiner, the terms "for magnifying" and "for narrowing" make the claims indefinite. Applicant respectfully traverses. However, claims 16 and 17 are amended herein to conform to the amended claim 9 and, as amended, it is believed that the claims are clearly in conformance with the requirements of 35 USC 112. Specifically, amended claim 16 specifies that the physical element that is coupled to, or is a part of, the credit card comprises means for magnifying. There is absolutely no ambiguity in such a specification; particularly in light of the teaching found in the specification. Similarly, amended claim 17 specifies that the physical element that is coupled to, or is a part of, the credit card comprises means for narrowing field of view.

Claim 2 was objected as being a substantial duplicate of claim 1. Applicant respectfully traverses. Claim 1 specifies three steps, but it does not explicitly specify that step 1 is taken before step 2. In other words, claim 1 is broad enough to encompass executing step 2 before step 1. Claim 2 fixes the order in which the steps are taken and, therefore, claim 2 is NOT a substantial duplicate of claim 1.

Claims 1-8 were rejected under 35 USC 102 as being anticipated by Owens et al, US Patent 6,338,140. Applicant respectfully traverses. The Examiner points to FIG. 9 of the

reference, which depicts a flowchart of the Owens et al authentication process. The text at col. 13, lines 28-61 give a high-level explanation of the FIG. 9 process and, therefore, it is deemed useful to present it here, with explanatory comments. The quoted text is presented below in the left-hand column, and comments are presented in the right-hand column.

Step S100: The subscriber registers (powers on) the telephone. The local mobile switching center MSC passes information back to the RPA which communicates with the IU to gain the user's profile. The IU is acting as the subscriber's Home Location Register (HLR) in IS-41 vernacular.	The text does not say it, but the ESN and the MIN are communicated by the mobile phone to the base station ( <u>apparently volitionally, and not in response to a request</u> ).
Step S120: In order to validate the subscriber, the dynamic PIN is cryptographically generated by the handheld password generator from a time-varying element and a cryptographic key or a derivative of the cryptographic key.	The PIN is generated volitionally, and not in response to a query, or a challenge from the system. Even if a system were to request it and only thereafter the mobile phone's user were to create it, it is still a creating that is wholly independent of any signal that is supplied by the system at the time of the request.
Step S140: The generated dynamic PIN is inputted via the mobile telephone to the local mobile switching center MSC.	That is, the mobile phone's user enters the PIN.
Step S160: The MSC substantially automatically, or after a time delay, transmits the entered sequence through the IS-41 SS7 network to the RPA.	This is a mere pass-through operation.
Step S180): The RPA cryptographically converts a time-varying value and the authentication key for the subscriber corresponding to the sent ESN and MIN to generate an acceptable PIN.	From the following steps it is surmised that, somehow, the RPA has the <i>same time varying value</i> , and the <i>same cryptographic key</i> as the hand-held PIN generator.
Step S200: The RPA compares the acceptable PIN it generated to the dynamic PIN sent from the mobile station.	
Step S220): If the PINs are the same, service to the communications network is granted. For example, the RPA may send information to the local mobile switching center (per the IS-41 Base Station System) that will enable	In order for the PINs to be the same, the base station needs to encrypt the same information, using the same key.

IS-41 Rev. A standard) that a call may be initiated. Further, the MSC may send an audible tone to the subscriber that is a "Go" tone to indicate success of identity validation.	
Step S240: Optionally, as will be explained below, the RPA may limit service to a number of authorized calls, for example, one authorized call.	
Step S260: If the PINs are not the same, service to the communications network is denied.	

Relative to comparisons to applicant's claims, the above can be summarized as follows:

- (a) The user turns on the user's mobile phone, and the mobile phone automatically sends information (the ESN and the MIN).
- (b) the user obtains a PIN from a hand-held device, and enters it into the mobile phone.
- (c) the base station accesses a database and obtains an encryption key based on the information sent in step (a) and develops its own PIN.
- (d) the base station compares its own generated PIN to that received from the mobile phone.

In contradistinction, claim 1 specifies three steps.

One of the steps, titled the "first step," is a step of both "interacting with said user to receive an ID from said user" and interacting "with a database to receive an ordered list of characters associated with said ID that were selected by said provider." The Examiner points to step s100, but this step is one where the mobile phone provides information to the base station. Significantly, it is not the **user**, or **subscriber** (to use the Owens nomenclature) who does, but the mobile unit itself. That makes the action fail to correspond to claim 1. Moreover, the information is not provided through, or in consequence of an **interaction** with the user; at least there is no teaching to that effect. This compounds the lack of correspondence to claim 1.

There is also no interaction with a database in s100, but one may append to s100 the step of obtaining an encryption key that is associated with the ESN and MIN to show an interaction with a database. This notwithstanding, it is noted that the "first step" specifies receiving from the database **an ordered list**. The encryption key is not an ordered list. A list is an item-by-item series of things, and an encryption key, which is one unitary item, does not constitute a list. Therefore, it is respectfully submitted that claim 1 is not anticipated by the Owens et al reference.

Actually, in the context of the Owens et al reference, a correspondence can almost be made with reference to step s140. That is, the "ID [received] from the user" can be asserted to correspond to the PIN that the user supplies, and the "ordered list of characters" is the cryptographic key. The correspondence does NOT quite fit, however, because, as indicated above, the cryptographic key is not an ordered list of characters, whereas the encryption key is a sting that represents a unitary object.

Applicant sees nothing in the Owens reference that might correspond to the "ordered list," and the Examiner has not pointed to any. Therefore, applicant respectfully submits that claim 1 is not anticipated by the Owens reference.

Another step of the claim 1 method, titled the "second step," interacts with the user by making a request of the user, and the user responds to the request. As to this step, the Examiner points to steps s140 through s200. Respectfully, these steps fail to correspond to applicant's claimed "second step," because the only step that refers to any action with the user is step s140, but the sending of the PIN is not described to be in response to a "requests placed to said user in the course of said interacting." Hence, though the PIN is provided, it is not provided in response to a request and, therefore, the "second step" is also not described by Owens et al. Consequently, applicant respectfully submits that Owens et al do not anticipate that claim 1.

Further, claim 1 has the step, titled "third step," which authorizes service when "the information received in response to said request" corresponds to "a subset of entries in said ordered list of characters." Even if one were to accept the Examiner's erroneous assertion that step s140, which is the only step (of steps s140-s200) that provides information – that being the PIN – it remains that this information (i.e., the PIN) does not correspond to a

subset of entries in said ordered list, as the claim specifies. Therefore, applicant again respectfully submits that claim 1 is not anticipated by the Owens et al reference.

Claim 2-8 depend on claim 8 and are, therefore, believed to also not be anticipated by the Owens et al reference.

As for claim 5, the Examiner's comment is not wholly understood. The Examiner points to step s120, and states (at page 7, line 10 et seq.)

“...where a dynamic PIN is being generated and this the characters in a dynamic format that is associated with the user ID since is being generated based on the receiving of the ESN and MIN of the user mobile device and where having a memory;”

As best understood, the Examiner asserts that the PIN that is generated comprises characters that are associated with the ESN and MIN, which are the user ID. This comports with the Examiner's assertion regarding the first clause of claim 1. However, the PIN is a string that is generated each time the method is executed. Although a different PIN is generated with each execution, at any one time, at any one execution of the method, only one PIN is generated. Moreover, the PIN is not a random number. It may look random, but it is totally deterministic. Therefore, the PIN cannot correspond to the “predetermined number of random variable.” Moreover, there is no teaching that the PIN is provided in response to any request.

In short, applicant respectfully submits that Owens et al do not describe an ordered list, do not describe a step where some element (e.g., base station) generates a collection of random numbers (which could be one number) and requests a user of the mobile phone to provide a string of characters that is responsive to each of the generated random numbers, and also do not describe flagging a number in the ordered list in response to each of the generated random numbers.

If the Examiner chooses to maintain the rejection, applicant respectfully requests a clear identification of

- (a) what is the ordered list,
- (b) what is (i) the interaction in the course of which (ii) the ID is provided (iii) by the user, and (iv) what is that ID (if it is not the ESN and the MIN),
- (c) what are the one or more random numbers, and
- (d) what are the responsive strings of characters.

As for claim 8, the Examiner's comments are, again, not wholly understood. In connection with the claim 8 clause where a database is accessed to retrieve N ordered lists, the Examiner points to s120 where the hand-held device generates a PIN and states:

... where a dynamic PIN is being generated and this the characters on the receiving of the ESN and MIN of the user mobile device and where having a memory;

To the extent the above is understood, it does not appear to be a teaching of a list of anything, and certainly does not teach N lists, where N is an integer. The Examiner also points to col. 7, lines 46-54, which state:

More specifically, the instant invention provides a system for validating an identity of a subscriber in a communications network. The system includes one or more communication servers, each including a database mapping valid communications device identification numbers to respective cryptographic keys. An input to the system includes a possible device identification number. An output may include a valid cryptographic key mapped thereto, if the possible device identification number is included in the database. The system includes one or more authentication servers, each including a first time-varying element for generating a time-varying value, and a processor. The time-varying element may include a clock, a counter, and/or a derivative thereof. The authentication server receives the valid cryptographic key from the communication server.

Respectfully, this passage teaches nothing about ordered lists being retrieved from a database. It merely teaches that a database exists where device IDs are stored and associated with cryptographic keys.

With reference to the clause that specifies generating a predetermined number of random variables, the Examiner seems to suggest that the encryption keys are random characters. That is simply incorrect. Encryption keys appear random, but they are far from being random.

As for the clause that specifies requesting the user to provide a responsive set of characters, the Examiner again points to steps s140-s200. Only step s140 provides information, but that information is not in response to anything, and it certainly is not a response to a random number or, as claim 8 specifies, "a responsive set of characters that is related to said random number." Based on these remarks and the remarks pertaining to claim 5, applicant respectfully submits that claim 8 is not anticipated by the reference.

Claims 9-17 were rejected under 35 USC 103 as being unpatentable over Owens et al in view of applicant's admissions of prior art. Applicant respectfully traverses.

The Examiner points to FIG. 10 and states that it teaches a "card characterized by a table of characters." That is simply not correct. FIG. 10 shows an electronic apparatus that includes a display. It has no tables. The Examiner points to cols. 14, 15 and 16, but the only tables discussed in those columns are tables that constitute the database of the base station (or the RPA, more precisely). The hand-held device has no tables.

As for combining the teachings of the prior art with the hand-held device, it is totally out of bounds to suggest that knowing about calling cards would suggest that a device that includes processor which creates a PIN based on a time-varying value could be, and ought to be, replaced with a calling card that has a visible (e.g., printed) table thereon.

The term "calling card" is commonly applied to a card that is processor-less. Applicant knows of no way for replacing the hand-held processor of Owens et al with a calling card, even after being cognizant of the suggestion (by the Examiner) to do it; i.e., after the fact. Certainly, it is not obvious to do it.

However, even if the calling card of claim 9 were to be interpreted broadly enough to encompass apparatus that includes a processor but is, nevertheless, called "calling cards," it is respectfully submitted that such a calling card, like the hand-held device of Owens et al, would NOT have a table of characters and, therefore, would not correspond to (the unamended) claim 9.

Claim 9 is amended herein in consequence of the 35 USC 101 rejection in order to expedite prosecution. Addressing the rejection of claim 9 relative to its amended form, it is noted that since it includes an additional limitation, it follows that amended claim 9 is more clearly not obvious (compared to the unamended claim 9) in light of Owens et al in view of admitted prior art. Claims 10-17 depend on claim 9 and are, therefore, believed to also not be obvious in view of the Owens et al reference and the admitted prior art.

Since amended claim 9 includes a limitation that subsumes the limitations of claims 15-17, it is appropriate to address the rejection of claims 15-17 at this point.

Claims 15-17 were rejected under 35 USC 103 as being unpatentable over Owens et al in view of admitted prior art and further in view of Walker et al, US Patent 6,625,284. Applicant respectfully traverses.

The Examiner points to FIGS. 2, 6, 8, and 10 of the Walker et al reference and asserts that it teaches a card with an LCD

that based on the time set magnify a message based on the ambient light and after time is expired it is narrowed to a point that is not being able to be read.

In applicant's view, that is a totally incorrect characterization of what Walker et al teach. FIG. 2 shows a card with an embossed area, a sensor, and a transducer. It shows nothing to magnify a message. Respectfully, the Examiner's usage of words is wrong and, therefore, mischaracterizing. One can amplify light. Some even speak in terms of magnifying light, though it is incorrect. However, magnifying a message has nothing to do with magnifying light. It is simply an optical means to have items appear larger to a viewer's eye. No such element is shown in FIG. 2, and actually, no element is shown that amplifies light either. FIG. 6 is a mere flow chart. It does mention a sensor that detects light, and it does mention outputting light, but that is not a teaching of anything that narrows field of view, collimates, or magnifies. FIGs. 8 and 10 are also mere flow charts, and they also do not teach anything that narrows a field of view, collimates, or magnifies. In fact, the Detailed Description portion of the Walker et al reference does not even have the words "field of view," "narrow," "restrict," "collimate," or "magnify."

Thus, in applicant's view the examiner's reading of the Walker patent is in error, and that there is nothing in the Walker et al patent that renders claims 15-17 obvious. By extension, it is respectfully submitted that amended claim 9 and all claims that depend on claim 9 are not obvious in view of Owens et al, Walker et al, and any other known prior art.

In light of the above amendments and remarks, applicant respectfully submits that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance are respectfully solicited.

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FIG. 1

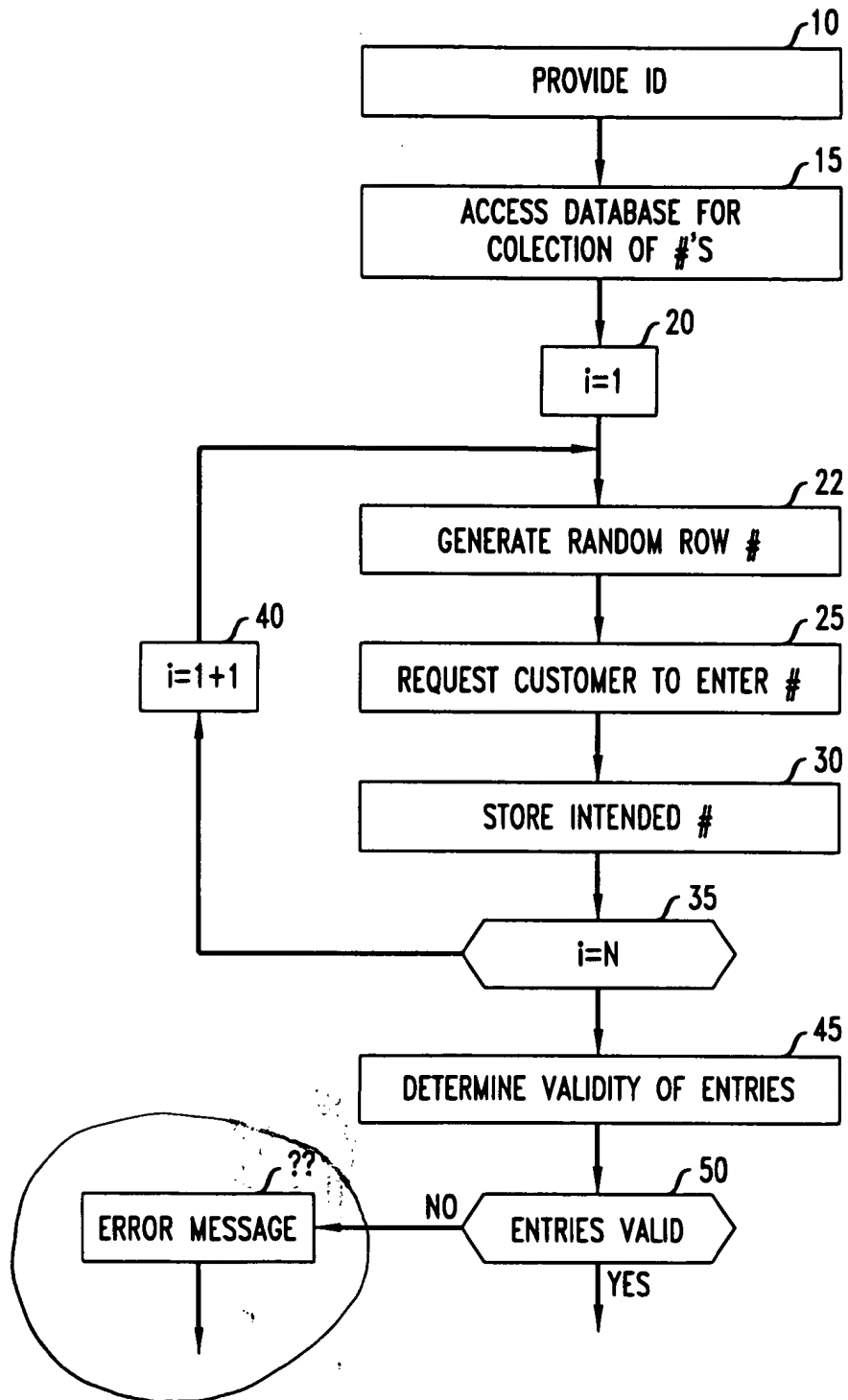




FIG. 1

